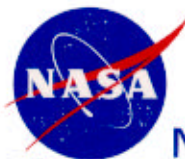


## The Environmental Assessment for Decommissioning the Reactor Facility



### NASA Glenn Plum Brook Station

This is one in a series of fact sheets prepared by NASA Glenn Research Center (NASA) to provide the public with information about decommissioning the closed Reactor Facility at Plum Brook Station. This fact sheet describes NASA's Environmental Assessment of the proposed decommissioning process in accordance with the National Environmental Policy Act.

From 1962 to 1973, NASA operated a 60 megawatt nuclear reactor and a 100 kilowatt mock-up reactor at Plum Brook Station under an operating license granted by the Nuclear Regulatory Commission (NRC) to study the effects of radiation on materials used in space flight.

### Decommissioning the Reactor Facility

After 11 years of operating the Reactor Facility under rigorous safety precautions and continuous monitoring, NASA properly shut down the Reactor Facility in 1973, removed the fuel, and made the facility inoperable. Since then, NASA has provided comprehensive maintenance and strict oversight of the Reactor Facility under the terms of the "Possess But Do Not Operate" license from the NRC. In 1998, NASA applied for renewal of its "Possess But Do Not Operate" license. Instead, the NRC asked NASA to complete decommissioning of the Reactor Facility in order to terminate its license.

#### NASA's Preferred Decommissioning Alternative

Removing contaminated equipment  
components, and systems

Removing contaminated  
debris and soil

Decontaminating buildings  
and structures

Demolishing structures to an  
elevation of 3 feet belowgrade

Backfilling belowgrade portions of  
the buildings with clean fill.

NASA agreed with the NRC that decommissioning the Reactor Facility makes sense. In 1998, NASA completed an evaluation of several decommissioning alternatives. From that analysis, NASA proposed to decontaminate and decommission the Plum Brook Reactor Facility for unrestricted use. NASA submitted a comprehensive Decommissioning Plan to the NRC in December, 1999.

NRC's review of the Plan is expected to take up to a year. NASA anticipates decommissioning to begin in late 2001 and be completed in 2007. While the NRC reviews the Decommissioning Plan, NASA is preparing an Environmental Assessment to evaluate the impacts on the environment of the proposed action in accordance with the National Environmental Policy Act (NEPA).

### The National Environmental Policy Act (NEPA)

The NEPA process requires that a review of environmental impacts be done in the early stages of planning a major federal action with the potential to significantly affect the quality of the human environment. Because decommissioning is considered a major federal action, NASA is performing a NEPA review to evaluate the environmental impact of the proposed action. In a separate evaluation, the NRC completed a NEPA review which was performed independently of NASA's Environmental Assessment, because the NRC is the federal agency that is responsible for terminating the Reactor Facility's license.



#### NEPA Requires Federal Agencies to:

- ▶ Consider the environmental impacts of major federal projects or decisions which include
  - spending federal money (NASA is responsible for decommissioning the Reactor Facility and funding it)
  - issuing permits (NRC is terminating a license)
  - taking actions that affect federal land
- ▶ Share information about environmental impacts with decisionmakers, public officials and citizens before decisions are made and actions are taken.
- ▶ Identify and assess reasonable alternatives that are technically and economically feasible, and can be accomplished in the necessary timeframe. The No Action alternative is also considered.
- ▶ Integrate and coordinate with any other planning and environmental reviews taking place.

#### NASA's Environmental Assessment Will Consider:

Air quality & meteorology  
Water resources  
Waste generation, treatment, transportation, & disposal  
Geology, soils, & topography  
Noise, sonic boom, & vibration  
Toxic substances & hazardous materials  
Biological resources & ecology  
Radioactive materials & non-ionizing radiation  
Endangered & threatened species  
Historical, cultural, & archeological resources  
Wetlands, floodplains, & prime or unique farmland  
Land use  
Socioeconomic factors (if related to impacts to natural or physical factors)  
Infrastructure  
Accidents involving hazardous, toxic, or radioactive materials  
Environmental justice  
Pollution prevention  
Public health & safety  
Stratospheric ozone depletion & global climate change

#### What will the Environmental Assessment Include?

When evaluating decommissioning alternatives in 1998, NASA considered environmental impacts associated with each alternative. The Environmental Assessment of NASA's proposed action will use the information from that analysis and consider other potential impacts to the environment. (See full list on left) NASA expects the Environmental Assessment to be completed by the end of September, 2000.

If NASA's Environmental Assessment finds potentially significant impacts, then a Notice of Intent (NOI) will be posted in the Federal Register stating that significant impacts are expected and NASA must prepare an Environmental Impact Statement (EIS). If, as expected, no potentially significant impacts are found, a Finding of No Significant Impact (FONSI) will be prepared stating reasons why decommissioning will not have a significant effect on the human environment and, therefore, why an EIS will not be prepared.

**The NRC completed its Environmental Assessment and has determined that an Environmental Impact Statement is not required. The NRC's Environmental Assessment, which is independent of NASA's Environmental Assessment, can be reviewed in the March 28, 2000 Federal Register.**

#### Public Participation

NASA values public participation in all stages of the decommissioning process including preparing the Environmental Assessment. NASA regularly shares information on the Reactor Facility decommissioning process with its fifteen-member Community Work Group. When the draft Environmental Assessment is completed, the document will be published in the Federal Register and a 30-day public review and comment period will be provided. As it does with all documents on the decommissioning process, NASA will place the draft Environmental Assessment in the Community Information Bank at Firelands College and other publicly accessible places. Following public review, the Environmental Assessment will be finalized and either a Finding of No Significant Impact (FONSI) or Notice of Intent (NOI) will be published in the Federal Register.

Prepare draft EA ➡ Public availability in Federal Register ➡ 30 day public review ➡ Finalize EA

NASA continues to be responsible for compliance with applicable regulations such as NEPA throughout the duration of the decommissioning process. Conducting an Environmental Assessment is one of the many steps NASA is taking to ensure the safe and thorough decommissioning of the Reactor Facility.



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